MONOGRAPH ON THE DEPOSITS OF NONFERROUS METALS AND RARE METALS WITHIN THE VERSAILLES TREATY FRONTIERS OF GERMANY

Summary

This monograph gives a comprehensive review of all nonferrous metal deposits in Germany which are being mined, explored or developed. It thus contains not only the mines actually in operation, but also the deposits which were explored during the past ten years and then not exploited because they were found to be not worth mining, and also those deposits which were being explored and developed up to the end of the war, but were never exploited because of the collapse of Germany. The number of the deposits discussed is therefore very large, and comprises a total of about 100 individual deposits.

The work has taken on the character of a great scientific study which has no counterpart. Up to now, no comprehensive, modern study of the German ore deposits has been available. Those works which include a discussion of ore deposits or ore mines within the scope of the German mineral wealth (such as Eiger "Die Bodenschaetze Deutschlands") are either obsolete or inadequate. An entirely new work had thus to be created. This was very difficult, since the data for the study (files, statistics, reports, drawings, etc.), both in the possession of private firms and of authorities, had been destroyed to a large extent during the war and following Germany's collapse, while another part of the data, especially those held by the Government, had been transferred to other Zones and were, therefore, beyond our reach. The study is, therefore, not equally thorough and complete for all regions discussed. The most complete section is that dealing with the deposits in the Soviet Zone, most of which - save for a few exceptions - were treated exhaustively. The deposits in the other Zones, which account for the greatest part of the nonferrous metal production of Germany, could not be presented as completely, because the difficulties in obtaining the

necessary material for study were insurmountable. This applies especially to all statistical data on metal contents, production, ore reserves, operational conditions, etc. This material contains a number of great gaps. It can be stated without fear of exaggeration that the losses caused by war in the field of geology are irreplaceable.

The material in this monograph is arranged by metals, or by groups of metals. Each group is introduced with a general review of the geological occurrence of the metals in question, followed by a discussion of the individual deposits, arranged by regions. At the end, the production and economic importance of each group of metals are discussed.

As distinguished from research topic 1/1(3112), this monograph places the emphasis on the discussion of mineralogical and geological conditions. Accordingly, the following subjects are treated in detail: Content and structure of the deposit, distribution of ore within the deposit, metal content, ore reserves, genesis. These chapters are followed by those dealing with operational conditions, production during the past few years, and economic potential.

The monograph is divided into 16 major sections, arranged by metals. It begins with a general summary of the regional distribution of the German nonferrous metal deposits and the genetic types of the deposits. This is followed by a discussion of the lead-zinc deposits, which are the most important ones of Germany. Five volumes are devoted to this topic, covering the deposits in the Freiberg region, the Harz Mountains, the region along both banks of the Rhine, the Black Forest, and Upper Silesia, a total of about 50 different deposits. A special section deals with the pure lead ore deposits, of sedimentary origin and containing no zinc and silver, which are few in number but economically important.

The second greatest role among the nonferrous metals in Germany is played by the deposits of copper, which are treated in three volumes. The emphasis here is placed on the Upper Permian sedimentary copper deposits, which supply ores of poor quality but which cover a great

area (Central and West German copper shale and Lower Silesian copper marl). The study of the copper shale was carried out by the Mansfeld A.G. of Eisleben. The hydrothermal copper veins, although numerous, are of only slight importance.

Three volumes treat the tin and tungsten deposits, which are of economic importance only in the area of the Erzgebirge in Saxony. They are divided into pure tin deposits, tin-tungsten deposits, and pure tungsten deposits. Eighteen individual deposits, among them several classical types of the deposits of the Erzgebirge, are discussed therein.

Of great scientific interest, although still of slight economic importance, are the cobalt-nickel-bismuth-uranium deposits, the classical development of which also occurred in the Erzgebirge (Schneeberg and Johanngeorgenstadt). Unimportant deposits of analogous types are found in other regions of Germany. However, the pure nickel deposits, especially the Silesian garnierite deposits, are of greater importance.

In addition to the Meggen deposit in Westphalia, which is one of the greatest in Europe, the pyrite deposits include a number of limited or minor importance, especially in Bavaria, in the Harz Mountains, and in the Rhineland.

This exhausts the topic of nonferrous metal deposits in Germany which are of economic importance. A final volume then gives a short summary of the unimportant deposits of antimony, arsenic, mercury, chromium, gold, and bauxite.

The final chapter, with the aid of statistical data, presents a compilation of the economic importance of the mining of nonferrous metals for Germany and a comparison with world production, and the potential development of the German nonferrous metal deposits on the basis of the evaluation carried out during the past ten to twelve years.

The entire monograph contains approximately 2,500 pages, in 15 volumes.

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